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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/823,464	03/30/2001	Jerry Ok	S116-USA	5748

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EXAMINER	
NGUYEN, BINH AN DUC	
ART UNIT	**PAPER NUMBER**
3714	

MAIL DATE	DELIVERY MODE
06/20/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Advisory Action Before the Filing of an Appeal Brief	**Application No.** 09/823,464	**Applicant(s)** OK ET AL.	
	Examiner Binh-An D. Nguyen	**Art Unit** 3714	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 01 May 2008 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☒ The period for reply expires *3* months from the mailing date of the final rejection.
   b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ They raise the issue of new matter (see NOTE below);
   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: _____.
   Claim(s) objected to: _____.
   Claim(s) rejected: *1-17 and 37-40*.
   Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____
13. ☐ Other: _____.

/Robert E Pezzuto/
Supervisory Patent Examiner, Art Unit 3714

Continuation of 11. does NOT place the application in condition for allowance because: Szobonya (3,517,437), Mizuhara et al. (5,368,220) , Chirino et al (3,999,004), Poniatowski et al. (DE19651851), Greuter et al. (5,071,828), and reasons of obviousness set forth in the Final Rejection sent February 5, 2008 do teach towards limitations claimed by the applicants.

Particlularly, referring to claims 1, 8 and 9, Szobonya teaches a method of fabricating a hermetic electrical feedthrough (Figs.3-7) comprising: providing an unfired un-sintered ceramic sheet having upper and lower forming a hole in said ceramic sheet extending from said upper surface toward said lower surface (2:12-25); inserting a wire into said hole (3:6-22); firing said sheet and wire to a temperature sufficient to sinter the sheet material and cause it to form a hermetic compression seal around said wire (3:23-63). Note that, Szobonya further teaches the terminal pin (10) may be positioned in the hole (16) so that the top surface of the pin lies a small distance (26)(Fig4) below the top surface of the base member (18); since the firing shrinkage characteristics of refractory base materials may be determined, the distance (26) may be calculated beforehand, with the result that after the firing process, the top surface of the terminal pin (10) and the base (18) will be substantially flush (3:23-48). Szobonya does not explicitly teach the limitations of the single or multiple intermediate "blind holes" and removing sufficient sheet material from said sheet lower surface to expose said wire (or removing sheet material under the blind holes to form through holes containing the wires), however, these are design choice since forming blind holes, inserting wire, and then remove material to form the through hole containing the wire does not bring unexpected results to the process. Further, regarding the step of removing sufficient sheet material from said sheet lower surface to expose said wire (claims 1, 8, and 9), it is notoriously well known in the industry to furnish final manufactured products by remove chips or unwanted materials. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the process Szobonya, by forming a blind hole on a substrate prior to forming the through hole, to come up with a different approach to form a hermetic electrical feedthrough that requires lower manufacture precision thus lower manufacturing cost.

Alternatively, referring to claims 1, 8, and 9, Mizuhara et al. teaches a method of fabricating a hermetic electrical feedthrough comprising: providing an unfired pre-sintered (2:38-49) ceramic sheet having upper and lower surfaces; forming a hole 17 in said ceramic sheet extending from said upper surface toward said lower surface; inserting a wire into said hole (Fig. 4); firing said sheet and wire to a temperature sufficient to sinter the sheet material and cause it to form a hermetic compression seal around said wire (4:37-41). Note that, the pre-sintered ceramic article of Mizuhara et al. (2:38-49) is equivalent to the amended un-sintered ceramic since the un-sintered ceramic would be sintered at the end of the manufacturing process as claimed by the applicant~ Mizuhara et al. does not explicitly teach the forming a single or multiple intermediate blind holes in ceramic sheet for insertion of conductive wires or pins (claims 1 and 8). Chirino et al., however, teaches forming multiple blind holes in ceramic sheet (Figures 2, 5, 6, and 9) for insertion of pins 17. Regarding the step of removing sufficient sheet material from said sheet lower surface to expose said wire (claims 1, 8, and 9), it is notoriously well known in the industry to furnish final manufactured products by remove chips or unwanted materials. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to provide multiple wire insertion blind holes on unfired ceramic sheets, as taught by Chirino et al. to Mizuhara et al.'s method of manufacturing hermetically sealed conductive feedthrough, to enhance a stronger hermetical sealing while requiring low manufacture precision thus lower manufacture cost and increase profits.

Referring to claim 37, Szobonya teaches a method of fabricating a hermetic electrical feedthrough (Figs.3-7) comprising: providing an un-sintered ceramic sheet having upper and lower surfaces; forming a hole in said ceramic sheet extending from said upper surface toward said lower surface (2:12-25); inserting a wire into said hole (3:6-22); firing said sheet and wire to a temperature sufficient to sinter the sheet material and cause it to form a hermetic compression seal around said wire (3:23-63). Note that, Szobonya further teaches the terminal pin (10) may be positioned in the hole (16) so that the top surface of the pin lies a small distance (26)(Fig4) below the top surface of the base member (18); since the firing shrinkage characteristics of refractory base materials may be determined, the distance (26) may be calculated beforehand, with the result that after the firing process, the top surface of the terminal pin (10) and the base (18) will be substantially flush (3:23-48). Szobonya does not explicitly teach the limitations of the single or multiple "blind holes" and removing sufficient sheet material from said sheet lower surface to expose said wire (or removing sheet material under the blind holes to form through holes), however, these are design choice since forming blind holes and then remove material to form the through hole does not bring unexpected results to the process. Further, regarding the step of removing sufficient sheet material from said sheet lower surface to expose said wire, it is notoriously well known in the industry to furnish final manufactured products by remove chips or unwanted materials. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the process Szobonya, by forming a blind hole on a substrate prior to forming the through hole, to come up with a different approach to form a hermetic electrical feedthrough that requires lower manufacture precision thus lower manufacturing cost. Furthermore, Szobonya does not explicitly teach the limitation of said firing occurs by ramping up to a first temperature at a first heating rate; then ramping up to a second temperature higher than the first temperature at a second heating rate different from the first heating rate. Poniatowski et al., however, teaches a method of producing platinum-coated oxide ceramic object wherein firing ceramic and platinum occurs by ramping up to a first temperature at a first heating rate; then ramping up to a second temperature higher than the first temperature at a second heating rate different from the first heating rate (page 2, lines 34-35 of the translation version). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide the ceramic firing techniques of Poniatowski et al. to the method of fabricating a hermetic electrical feedthrough, as taught by Szobonya to evenly distribute stress and provide a uniform tied fit manufactured metal-ceramic product.

Further, alternatively, referring to claim 37, Mizuhara et al. teaches a method of fabricating a hermetic electrical feedthrough comprising: providing an unfired pre-sintered (2:38-49) ceramic sheet having upper and lower surfaces; forming a hole 17 in said ceramic sheet extending from said upper surface toward said lower surface; inserting a wire into said hole (Fig. 4); firing said sheet and wire to a temperature sufficient to sinter the sheet material and cause it to form a hermetic compression seal around said wire (4:37-41). Note that, the pre-sintered ceramic article of Mizuhara et al. (2:38-49) is equivalent to the amended un-sintered ceramic since the un-sintered ceramic would be sintered at the end of the manufacturing process as claimed by the applicant. Mizuhara et al. does not explicitly teach the

forming a single or multiple blind holes in ceramic sheet (claims 1 and 8). Chirino et al., however, teaches forming multiple blind holes in ceramic sheet (Figures 2, 5, 6, and 9). Regarding the step of removing sufficient sheet material from said sheet lower surface to expose said wire (claims 1, 8, and 9), it is notoriously well known in the industry to furnish final manufactured products by remove chips or unwanted materials. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to combine Mizuhara et al.'s method of manufacturing hermetically sealed conductive feedthrough with a method of mounting conductor on ceramic substrate, as taught by Chirino et al., to enhance a stronger hermetical sealing method that has lower manufacture cost thus increase profits. Mizuhara et al. and Chirino et al. do not explicitly teach the limitation of said firing occurs by ramping up to a first temperature at a first heating rate; then ramping up to a second temperature higher than the first temperature at a second heating rate different from the first heating rate. Poniatowski et al., however, teaches a method of producing platinum-coated oxide ceramic object wherein firing ceramic and platinum occurs by ramping up to a first temperature at a first heating rate; then ramping up to a second temperature higher than the first temperature at a second heating rate different from the first heating rate (page 2, lines 34-35 of the translation version). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide the ceramic firing techniques of Poniatowski et al. to the method of fabricating a hermetic electrical feedthrough, as taught by Mizuhara et al. and Chirino et al. to evenly distribute stress and provide a uniform tied fit manufactured metal-ceramic product.